Article

Effect of high and low frequency exercise therapy in patients after coronary artery bypass graft surgery

Periyasami, Muruganandam, Rao, Pasupuleti Visweswara and Soon, Jan Mei

Effect of high and low frequency exercise therapy in patients after coronary artery bypass graft surgery

Muruganandam Periyasami, Pasupuleti Visweswara Rao, Jan Mei Soon

Lovely Professional University, Phagwara, India (M Periyasami MSc); Universiti Malaysia Kelantan, Kelantan, Malaysia (P V Rao PhD); and University of Central Lancashire, Preston, UK (J M Soon PhD)

Correspondence to:

Dr Jan Mei Soon, School of Sport and Wellbeing, University of Central Lancashire, Preston, Lancashire, PR1 2HE, UK

jmsoon@uclan.ac.uk

Abstract

Background Coronary artery bypass graft (CABG) surgery is one of the major surgeries requiring long-term stay in hospital. This generally leads to the detrimental effects of bed-rest, including dependency in self-care, transfer, and locomotion. Our aim was to compare the effect of high-frequency and low-frequency exercise therapy in patients who had undergone CABG.

Methods Patients who had undergone CABG were recruited from PSG Medical College and Hospital, Coimbatore, India, between Jan 1 and March 31, 2006. Functional Independence Measure (FIM) and modified Borg Rating of Perceived Exertion (RPE) were used to assess functional outcome. In a quasi-experimental design, patients received either high-frequency exercise therapy (exercise three times a day for 10 days, group 1), or low-frequency exercise therapy (once a day for 10 days, group 2). Data were analysed with paired *t* tests.

Findings 30 patients were recruited (15 in each group). Mean FIM was 75 (SD 1·77) in group 1 and 64 (1·65) in group 2. There was a significant difference between the pretest and post-test FIM values in group 1 patients (49·07 [2·43] *vs* 124·07 [1·75], p<0·0001) but not in group 2 patients. The RPE in group 1 and group 2 was 6·3 (0·62) and 4·2 (0·7), respectively.

Interpretation Patients given high-frequency exercise thearpy had a significant improvement in their physical activity, but low-frequency exercise did not lead to significantly improved changes. In conclusion, the high-frequency exercise therapy improves the functional ability of patients with CABG.

Funding None.

Contributors

MP designed the study, and collected and analysed the data. PVR contributed to the planning, design, and analysis of the study, and to the writing of the abstract. JMS analysed data and wrote the abstract.

Declaration of interests

We declare no competing interests.